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Three New Species of Labidocarpine Mites (Listrophoroidea, Chirodiscidae) from Puerto Rican Bats

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Abstract—Three new species of labidocarpine mites (Listrophoroidea, Chirodiscidae) are described from Puerto Rican bats. The new species and hosts are *Lawrenceocarpus puertoricensis* sp. n. from *Brachyphylla cavernarum*, *Paralabidocarpus foxi* sp. n. from *Artibeus j. jamaicensis*, and *Paralabidocarpus stenodermi* sp. n. from *Stenoderma rufum darioi*.

The only publication treating listrophorid mites from Puerto Rican bats was by Tamsitt and Fox (1970), who reported the species *Paralabidocarpus artibei* Pinichpongse (1963), *Dentrocarpus* (=*Dentocarpus*) *silvai* Dusbábek and Cruz (1966), and *Lawrenceocarpus micropilus* Dusbábek and Cruz (1966). We examined part of the collection studied by Tamsitt and Fox and additional material, and mites reported by these authors as *L. micropilus* and *P. artibei* were found to represent three new species, described here (Figs. 1–4). The chaetotaxy nomenclature is that of Fain (1970b), and where applicable, his designations are given in parentheses after referring to setae. Although other classifications for listrophorid mites have been proposed (see McDaniel, 1968), we follow Fain (1971) by considering the Listrophoroidea to be a superfamily containing the family Chirodiscidae and the subfamily Labidocarpinae.

Materials and methods—We examined recently killed and preserved bats under a dissecting microscope, removed mites attached to hairs, fixed them in 70% ethanol and, after mounting specimens in Hoyer's medium, studied them by bright-field and interference-contrast (Normarski phase) microscopy. For scanning electron microscopy, we mounted hairs with affixed mites onto aluminum stubs with 3M adhesive transfer tape (Minnesota Mining and Manufacturing Co., London, Ontario). Specimens were air dried, coated with gold (about 20 nm thick) in an Edwards Model 4 vacuum evaporator (Edwards High Vacuum,

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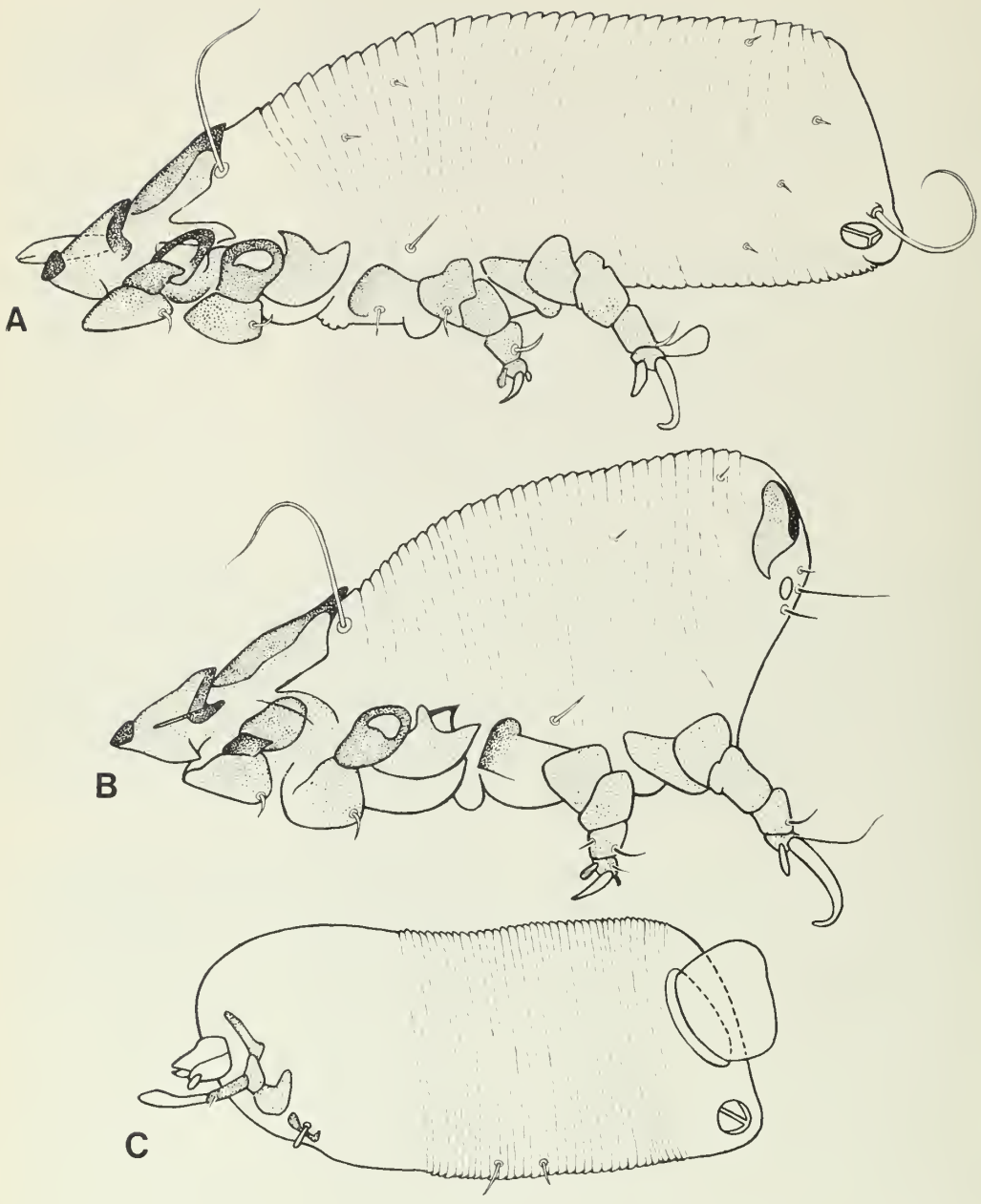


Fig. 1—*Lawrenceocarpus puertoricensis* sp. n.

A. Holotype female, × 180.
B. Allotype male, × 230.
C. Paratype copulatory female, × 180.

Oakville, Ontario), and stored in a chemical desiccator until they were viewed in a Mark IIA Stereoscan electron microscope (Cambridge Instruments Co., Cambridge, England) operated at 20 KV. We measured mites with a calibrated ocular micrometer; measurements are given in micrometres (μm).

In the descriptions that follow, measurements of paratypes are given in parentheses after those of the holotypes. Holotypes and other specimens are deposited in the Department of Entomology and Invertebrate Zoology, Royal Ontario Museum (ROM), Instituto de Zoología, Academia de Ciencias de Cuba, La Habana (ACC), and the Department of Medical Zoology, School of Medicine, University of Puerto Rico, San Juan (UPR). Hosts examined are in the Department of Mammalogy, Royal Ontario Museum (ROM), and the Department of Biology, Texas Tech University (TTU).

Lawrenceocarpus puertoricensis sp. n.
(Figs. 1A-C, 2A-F, 4A,B)

Lawrenceocarpus micropilus, Tamsitt and Fox, 1970, p. 399 (not *L. micropilus* Dusbábek and Cruz, 1966).

Female (holotype) (Fig. 1A)—Length (including gnathosoma) 665 (657–670), height (between legs III and IV) 186 (196–239); body laterally compressed, higher toward region of legs III, height maintained to posterior apex of body; 49 (47–51) fine, transverse annulations posterior to propodosomal plates.

Gnathosoma not clearly delineated, only the strong, chelate chelicerae distinguished.

Propodosomal plates three; anterior small, triangular, divided at mid-dorsal line, covering extreme anterior of gnathosoma; intermediate plate larger than the anterior, also divided, with two, prominent heavily-sclerotized posterodorsal processes; posterior plate entire, larger than the intermediate, also with two prominent posterodorsal processess (Fig. 2A).

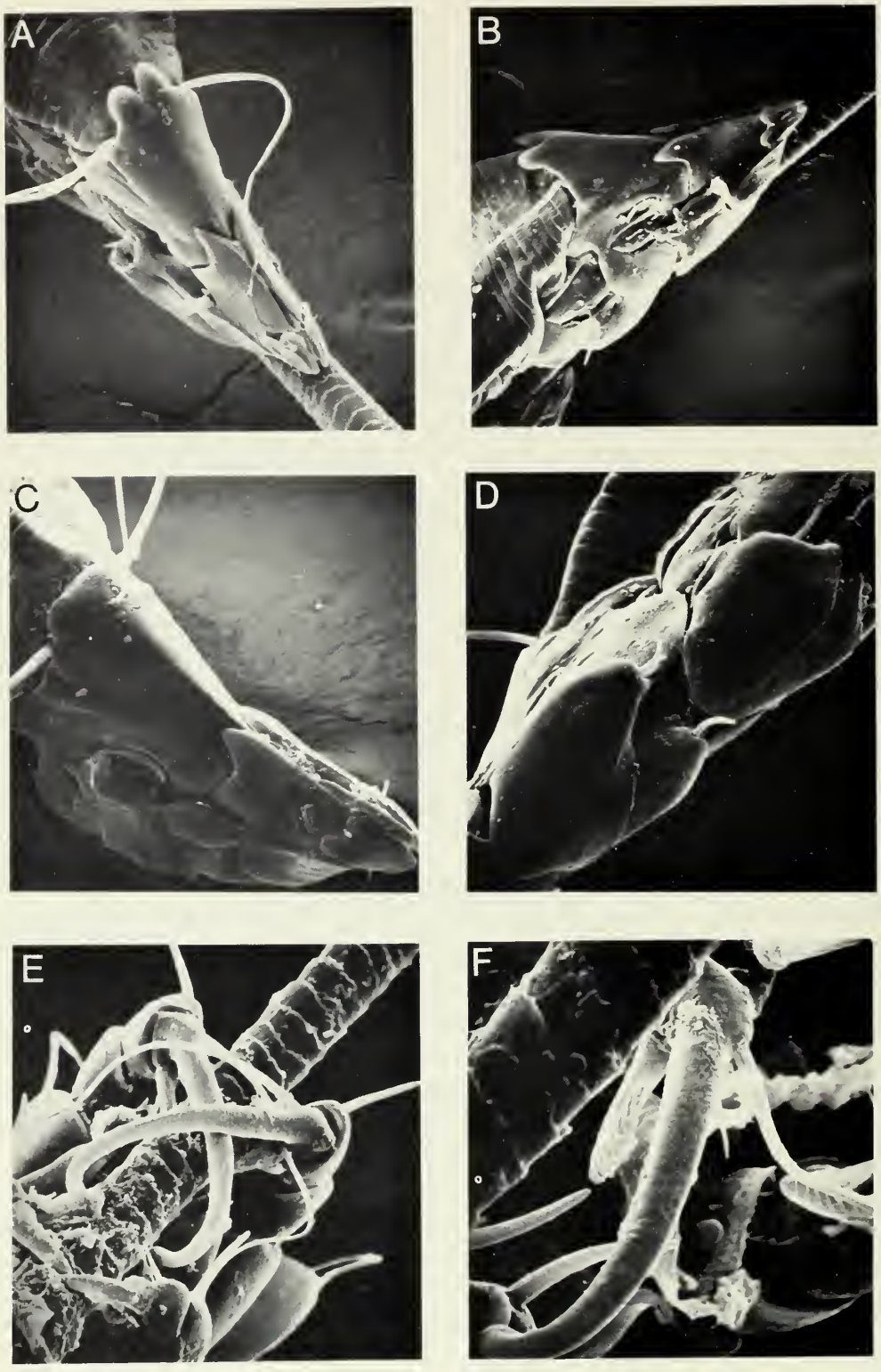
Legs I and II (Fig. 2D) of usual labidocarpid type, flap-like, dilated distally to grasp hair of host, with three and two segments respectively, heavily sclerotized; coxal apodemes not distinctly delineated, also heavily sclerotized. A pair of short, stout, curved setae present distobasally on tarsal segments I and II.

Legs III and IV (Fig. 4A,B) separated from legs I and II and situated near middle of body. Legs III with four segments; basal segment immovable, wider than long; second slightly smaller, as long as wide; third smaller than second, wider than long, bearing a long, stout, curved solenidion on posterior border; tarsus small, oval, with a curved, longitudinally-grooved claw that is 2.5 times longer than entire tarsus; tarsus also bearing a shell-shaped, striated accessory spur with distal border serrated and two setae, one fine and short, the other leaflet-shaped. Legs IV (Fig. 2E,F) also with four segments, similar to those of legs III but longer, first segment and tarsus as long as wide, second and third segments longer than wide; third segment with a long, stout, curved distoposterior seta; tarsus with a stout, blunt claw curved distally and four times longer than tarsus; tarsus also bearing a striated, leaflet-shaped accessory spur with serrated edges and straight anterior margin, and a fine seta slightly longer than claw. Coxal apodemes III and IV heavily sclerotized, movable.

A pair of long, slender, metapodosomal (*sc i*) setae posterior to third propodosomal plate, another pair of short, slender, metapodosomal (*sh*) setae dorsal to coxal apodemes III. Anus located ventrally at extreme posterior apex of body, flanked by a pair of long perianal setae. Body with four pairs of short opisthosomal setae and two pairs of metapodosomal setae (Fig. 1A).

Male (allotype) (Fig. 1B)—Length 425 (420–425), height 178 (161–178); body laterally compressed, a series of 35(±) fine annualtions extending from posterior propodosomal plate to posterodorsal border of body.

Gnathosoma, propodosomal plates (Fig.


A
B
C
D
E
F

2B), coxal apodemes, and legs (Fig. 2E) similar to those of females.

Copulatory organ composed of a chitinous support situated near extreme posterodorsal border of body, a pair of short, thick setae ventral to support, a pair of long setae and a pair of anal suckers at same level, and a pair of medium-length setae ventral to suckers.

A short, fine pair of opisthosomal setae near extreme posterodorsal margin of body, another similar pair of setae near dorsal margin in the metapodosomal region, another longer metapodosomal pair (*sh*) above coxal apodemes III, and a long, fine pair of setae (*sc i*) posterior to propodosomal plates.

Copulatory female (Fig. 1C)—Length (425–493), height (187–195). Body compressed laterally, with 43 ± transverse annulations, but annulations absent from region of legs II anteriorly and in extreme posterior of body.

Gnathosoma subterminal, heavily sclerotized, consisting of a pair of strong chelicerae and rudimentary palps.

Legs I situated near gnathosoma, each composed of three segments; basal wider than long; second cylindrical in shape, longer than wide, bearing a short, thick seta located distoventrally; third segment longer than combined length of basal and second segments, spatula-shaped, convex. Coxal apodemes I plate-like, surrounding basal segment of legs I medially, and with a projection passing behind gnathosoma. Position of legs II indicated by leaflet-shaped setae, posterior to legs I; apodemes II long and fine, extreme posterior bent at right angles and extreme anterior dilated and plate-like. Approximate positions of legs III and IV denoted by long, fine, metapodosomal setae, the anterior pair shorter than posterior pair, situated in midventral part of body (Fig. 1C). Lateral hysterosomal setae absent.

Anus in posteroventral region of body, possessing a chitinous support. Extreme midposterior region of body with wing-like processes that aid in clasping male.

Larva (Fig. 2C)—Length (300–307), height (124–126). Body with more than 50 fine annulations, tapering posteriorly.

Propodosomal plate as in female but dorsal processes absent. Legs I and II as in female but tarsal setae longer, finer. Legs III similar to those of female but position slightly more posterior.

Anus terminal, with a chitinous support.

Medial part of opisthosoma with three pairs of medium-length, fine setae arranged transversely in a row, the shortest near dorsal margin and the other two, subequal, lateral to medial line; another short pair of fine setae dorsally and slightly anterior, another in medial part of metapodosoma, located more dorsally than ventrally, and another pair of setae between propodosoma and metapodosoma. On coxal apodemes III a pair of fine setae, longer than those previously mentioned, and another pair longer and finer posterior to propodosomal plates.

Type data—Holotype female (ROM), allotype male (ROM) from *Brachyphylla cavernarum*, collected by J. R. Tamsitt and Dario Valdivieso, Corozal Cave, near Corozal, Puerto Rico, 30 May 1967, host number ROM 42891. Six paratype females (ROM, UPR), two paratype males (ACC), two paratype copulatory females (ROM, ACC), and two paratype larvae (ROM, UPR) from typical host, same collectors and locality,

Fig. 2—Scanning electron photomicrographs of *Lawrenceocarpus puertoricensis* sp. n.
- A. Propodosoma of female, dorsal view, × 310.
- B. Propodosoma of male, dorsolateral view, × 300.
- C. Propodosoma of larva, dorsolateral view, × 635.
- D. Legs I and II of female surrounding hair of host, × 530.
- E. Legs IV and distal part of legs III of male, ventral view, × 625.
- F. Left leg IV of female, ventrolateral view, × 1,250.

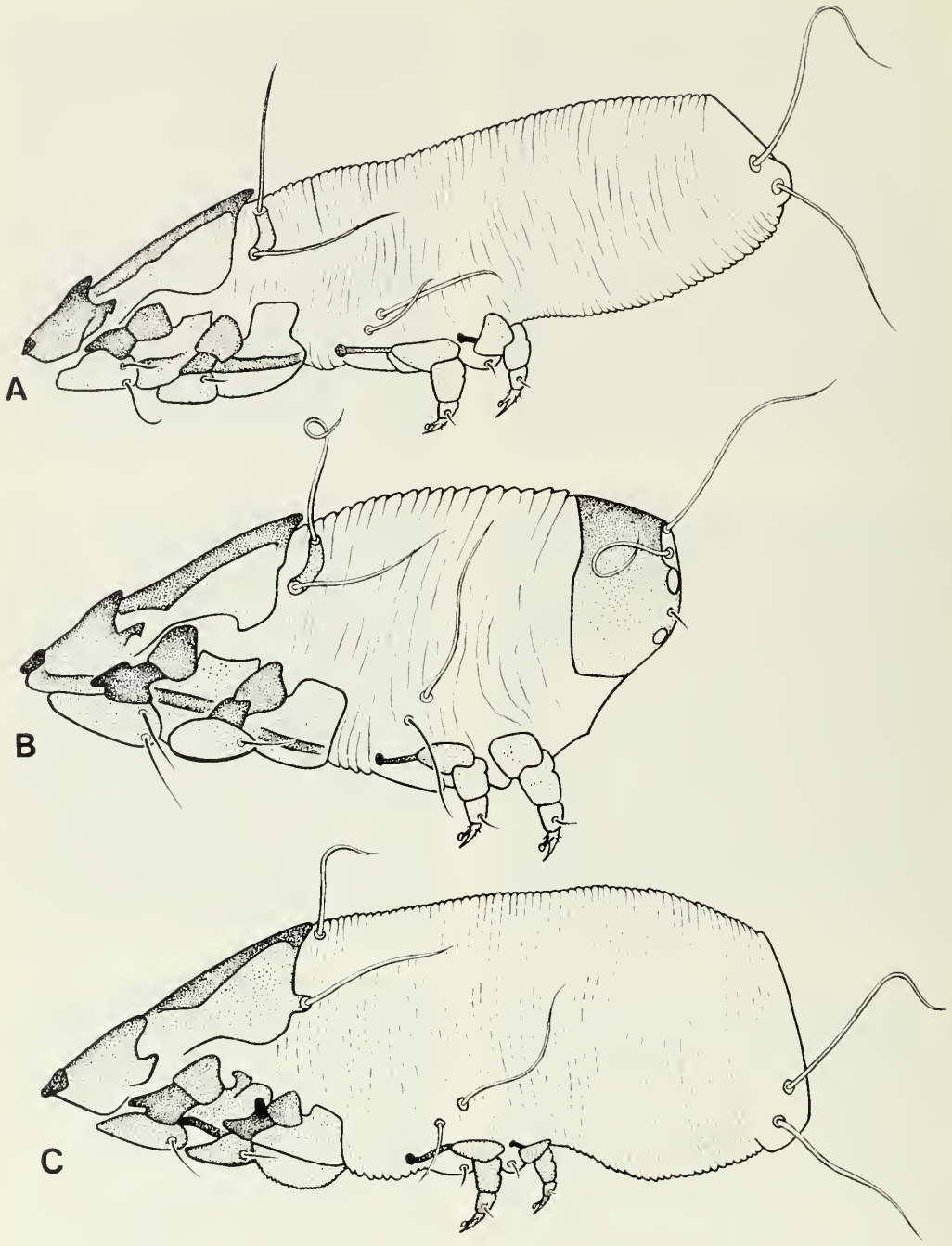


Fig. 3—*Paralabidocarpus* spp. n.

A. *P. foxi* sp. n., holotype female, × 260.

B. *P. foxi* sp. n., allotype male, × 320.

C. *P. stenodermi* sp. n., holotype female, × 240.

30 May 1967, host number ROM 42749. Ten paratype females (ACC) and two paratype larvae (ACC), same host and locality as other paratypes. Other material (ROM) studied: eight females, five males, three larvae from typical host (ROM 44600), collected by M. Brock Fenton, Aguas Buenas Caves, near Aguas Buenas, Puerto Rico, 13 February 1968; three females, one male, from typical host (ROM 44726), collected by T. E. Rogers, Cueva Honda, near Aguadilla, Puerto Rico, 3 March 1968.

Remarks— *Lawrenceocarpus puertoricensis* differs primarily from *L. micropilus* Dusbábek and Cruz (1966) by larger size (length of females 665 and 408, respectively; length of males 425 and 290, respectively), number and position of opisthosomal setae in both sexes, the presence of a leaflet-shaped seta on tarsus III in *L. puertoricensis* (absent in *L. micropilus*), the shape of the accessory spur of tarsus IV (straight in *L. puertoricensis*, curved in *L. micropilus*), shape and position of the male copulatory organ, shape of coxal apodeme I, and shape and position of legs II–IV of copulatory female. *L. puertoricensis* is similar to *L. dusbabeki* Cruz (1969) but differs from it by larger size (length of females 665 and 433, respectively; length of males 425 and 319, respectively), shape of the claws, the relative shape and size of the copulatory organ of the male, the shape and position of legs II–IV of the copulatory female, and by hysterosomal setae in the larva. From *L. lobus* McDaniel (1970) *L. puertoricensis* differs by the less marked development of the posterior projections of the propodosomal plate, by the chaetotaxy of the body, and by larger size (length of females 665 and 360, respectively; length of males 425 and 246, respectively). The new species is distinguished as well from *L. mimon* Fain (1970a) by larger size (length of females 665 and 510, respectively; males of *L. mimon* unknown), by the presence of the leaflet-shaped seta of tarsus IV (absent in *L. mimon*), and by the chaetotaxy of the body. From *L. phyllostomus* McDaniel (1972) *L. puertoricensis* differs by smaller size of the male (length 425 and 520, respectively), larger size of the female (length 665 and 623, respectively), number and position of opisthosomal setae, and the presence of a leaflet-shaped seta on tarsus III (seta unmodified in *L. phyllostomus*).

We also distinguished in our material an eight-legged stage (probably a nymph similar to that described by Dubinina, 1964, for *Histiophorus* sp.) that differs from females only by smaller size (length 391–541, height 118–198) and by the slightly greater number of annulations (49–54).

Lawrenceocarpus puertoricensis, known only from the type host in Puerto Rico, is common on hairs of the dorsum of the interfemoral membrane, forearm, and wing membrane posterior and proximal to the forearm.

Paralabidocarpus foxi sp. n.
(Figs. 3A,B, 4E,F)

Paralabidocarpus artibei, Tamsitt and Fox, 1970, p. 399 (in part; not *P. artibei* Pinichpongse, 1963).

Female (holotype) (Fig. 3A)—Length of body 429 (382–429), height of body 99 (92–105). Body laterally compressed, bearing 48 (43–49) fine, transverse annulations; edges subparallel but slightly tapered posterior to legs IV.

Gnathosoma heavily sclerotized, only the strong, chelate chelicerae distinguished.

Propodosoma heavily sclerotized, divided into three plates; anterior smallest, subtriangular; intermediate larger than first, with two prominent dorsal processes; third three times larger than second, also with two prominent dorsal processes, sharply pointed, extending posterodorsally beyond border of body.

Legs I and II labidocarpid type, of three segments each. Legs I longer than legs II. Tarsus I bearing two strong, curved setae on lateroposterior border; tarsus II with only one seta, finer than that of tarsus I, on posterodorsal border.

Legs III and IV (Fig. 4E,F) separated from legs I and II and approximately in midregion of body, each of four segments. Basal segment of legs III immovable, wider than long; remaining segments decreasing in size and increasing in relative length; third segment bearing a long, stout solenidion; tarsus III with a long, curved claw, two short, thick accessory spurs, rounded at tips, a long, thick pedunculate caruncle, and three fine setae. Legs IV similar to legs III but longer, tarsus bearing one rather than two accessory spurs. Coxal apodemes III long, fine, heavily sclerotized, joined anteriorly, two-thirds length of leg III. Coxal apodemes IV similar in shape to those of III, as long as basal segment of leg III.

Anus subterminal, ventral.

Two pairs of propodosomal setae (*sc i*, *sc e*), long and stout (inferior stouter than superior), arising from each end of a small j-shaped plate posterior to last propodosomal plate. Above coxal apodeme III are two pair of long, fine setae (*h*, *sh*), inferior shorter and thinner than superior. Anterior to legs IV, on ventral part of body, are a pair of very short, fine setae. At extreme posterior of body, in a conical zone more heavily sclerotized than surrounding areas, are two pairs of long, fine setae, subequal in length (Fig. 3A).

Male (allotype) (Fig. 3B)—Length 297, height 118. Body laterally compressed, wider between legs II and III, robust, with 21 fine, transverse annulations.

Propodosomal plates, gnathosoma, and legs as in female, but legs III and IV situated posterior to midregion of body.

Copulatory organ consisting of a heavily sclerotized area bearing three pairs of fine setae (dorsal and intermediate setae long, subequal, ventral setae short) and two pairs of anal suckers (one between intermediate and ventral setae, the other below ventral seta).

There are two pairs of propodosomal setae (*sc i*, *sc e*) and two pairs of metapodosomal setae (*h*, *sh*), the latter dorsal to coxal apodemes III, shape and position as in the female.

Copulatory female—Not available for study.

Larva—Not available for study.

Type data—Holotype female (ROM), allotype male (ROM), two paratype females (ROM, UPR), one paratype female (ACC) from *Artibeus j. jamaicensis*, collected by J. R. Tamsitt and Dario Valdivieso, Luquillo Experimental Forest, near El Verde, Puerto Rico, 12 February 1967, host number ROM 40617. Other material (ACC) studied includes three females from *Stenoderma rufum darioi*, from same locality as the holotypes, collected by Robert J. Baker, 20 July 1969, host number TTU 8857.

Remarks—*Paralabidocarpus foxi* differs primarily from *P. artibei* Pinichpongse (1963) by being slightly larger (length of females 429 and 377, respectively; length of males 297 and 265, respectively), by having the inferior pair of setae (*sh*) near coxal apodemes III noticeably smaller than the superior pair (*h*), and by the shape of the small plate from which the propodosomal setae (*sc i*, *sc e*) arise. From *P. tonatiae* Fain (1970a), *P. foxi* differs by being slightly larger (length of females 420 and 429, respectively; length of males 285 and 297, respectively) and by not having the gnathosoma notably more pointed. *P. carolliae* Fain (1970c) is distinguished from *P. foxi* by its smaller size (length of females 360 and 429, respectively; length of males 246 and 297, respectively) and by the greater development of the solenidion of leg IV. *P. foxi* is distinguished from *P. macrophyllum* Fain (1972) by larger size (length of females 429 and 306, respectively), by the length of the superior seta (*h*) dorsal to coxal apodeme III (considerably shorter in *P. macrophyllum*), and by the absence of a sclerotized external projection arising from basal segment II. From *P. trachops* Fain (1972) *P. foxi* differs by being larger (length of females 360 and 429, respectively; length

of males 285 and 297, respectively), by the considerably longer inferior seta (*sh*) dorsal to apodeme III (thin and extremely short in *P. trachops*), and by the relative positions of the propodosomal setae (ventral setae, *sc e*, far anterior to dorsal setae, *sc i*, in *P. trachops*). *P. surinamensis* Fain (1970c), *P. desmodus* Fain (1972), and *P. anthorhinae* Fain (1973) apparently belong to another group of species, along with *P. stenodermi* sp. n., in which a sclerotized bar between the propodosomal setae (*sc i*, *sc e*) is absent. This mite was found only on hairs of the proximal part of the forearm and adjoining wing membrane of the hosts.

The species is named in honour of Dr. Irving Fox, Professor of Medical Entomology, School of Medicine, San Juan, Puerto Rico, who has contributed greatly to an understanding of the taxonomy of mites of Puerto Rico.

Paralabidocarpus stenodermi sp. n.
Paralabidocarpus artibei, Tamsitt and Fox, 1970, p. 399 (in part; not *P. artibei* Pinichpongse, 1963).

Holotype (female) (Fig. 3C)—Length 449 (402–449), height 138 (125–138). Body robust, laterally compressed, higher posterior to legs IV, having 61–63 transverse annulations.

Only the strong, chelate chelicerae distinguished in gnathosoma.

Propodosomal plates three; anterior small, subtriangular; intermediate larger than first, with two prominent dorsal processes, pointed, not surpassing dorsal border of body; the stout, posterior plate extending to level of legs II, almost three times as large as intermediate plate, with two prominent posterodorsal processes, each plate with a short process near posterolateral angle from which arise the lateral propodosomal setae (*sc i*, *sc e*).

Legs I and II labidocarpoid, heavily sclerotized. Legs I with three segments; second segment with a prominent, heavily sclerotized projection on anterior border; tarsal segment with a long, strong seta toward extreme distobasal border. Legs II, also of three segments, smaller than legs I; second segment with a spine-like projection on anterodorsal edge; tarsal segment with a short seta toward posteromedial border.

Legs III and IV (Fig. 4C,D) separated from legs I and II, position metapodosomal, each with four segments. Basal segment of legs III immovable, wider than long, approximately as large as second segment, which is longer than wide; third segment smaller than second, with a stout solenidion located near extreme posteroventral border; tarsus small, rounded, smaller than third segment, bearing a long, curved claw, three short, fine setae, a caruncle almost as long as tarsus, and two short, thick accessory spurs. Coxal apodemes III long, thin, heavily sclerotized, slightly curved and with an anterior swelling, longer than apodemes IV. Legs IV smaller than legs III, basal segment shorter than that of legs III, seta of third segment fine, tarus with one short accessory spur instead of two, otherwise legs IV similar to legs III.

Anus ventral, subterminal.

Two pairs of long, stout, opisthosomal setae of subequal length dorsal to anus; two pairs of metapodosomal setae (*h*, *sh*) anterodorsal to legs III, the inferior smaller; a pair of short, fine metapodosomal setae anterior to base of legs IV, and another similar pair of setae anterior to legs III; two pairs of long propodosomal setae behind propodosomal plates, the lower (*sc e*) arising from posterior plate, larger than upper (*sc i*).

Male—Not available for study.

Copulatory female—Not available for study.

Larva (Paratype)—Similar to female, from which it differs only by absence of legs IV, dorsal processes of posterior propodosomal plate less prominent, and smaller size (length 356, height 106).

Type data—Holotype female (ROM) from *Stenoderma rufum darioi*, collected by J. R.

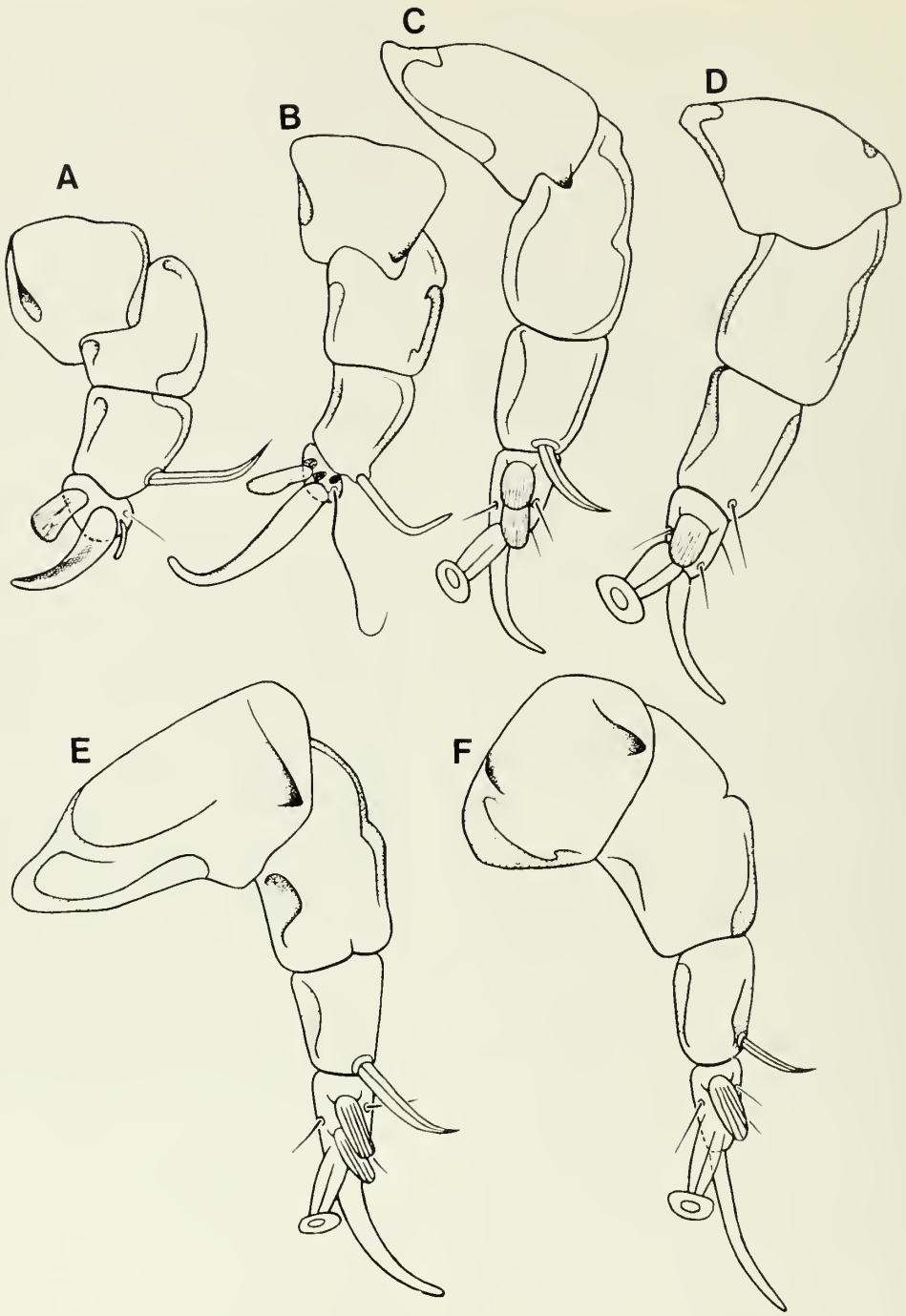


Fig. 4—*Lawrenceocarpus* sp. n. and *Paralabidocarpus* spp. n.

A. *L. puertoricensis* sp. n., leg III of holotype female, × 420.
B. *L. puertoricensis* sp. n., leg IV of holotype female, × 420.
C. *P. stenodermi* sp. n., leg III of holotype female, × 935.
D. *P. stenodermi* sp. n., leg IV of holotype female, × 1,530.
E. *P. foxi* sp. n., leg III of holotype female, × 1,435.
F. *P. foxi* sp. n., leg IV of holotype female, × 1,140.

Tamsitt and Dario Valdivieso, Luquillo Experimental Forest, near El Verde, Puerto Rico, 31 April 1967, host number ROM 42749. Female paratype (ACC) and larva paratype (ACC) from same host and locality as holotype female, collected by Robert J. Baker, 20 July 1969, host number TTU 8857. Other material (ACC) studied includes six females from same host and locality, collected by J. R. Tamsitt and Dario Valdivieso, 12 February and 17 July 1967.

Remarks—*Paralabidocarpus stenodermi* is similar to *P. surinamensis* Fain (1970c), but the two are distinguished by the larger size (length of female *P. stenodermi* 449; length of "larvigerous" female *P. surinamensis* 495; Fain, 1970c, p. 178) and by the short solenidion of the third segment of leg IV of the latter. From *P. desmodus* Fain (1972), *P. stenodermi* is distinguished by larger size (length of females 394 and 449, respectively), the shortness of the inferior seta (*sh*) dorsal to coxal apodeme III, which is three times longer in *P. stenodermi*, and the relative shortness of the gnathosoma to the propodosomal plates in *P. desmodus*. From *P. anthorhinae* Fain (1973) *P. stenodermi* differs primarily by larger size (length of females 375 and 449, respectively). *P. stenodermi*, *P. surinamensis*, *P. desmodus*, and *P. anthorhinae* differ from other species of the genus in the shape of the propodosomal plates, in the absence of a sclerotized bar between the propodosomal setae, and in the relative size and disposition of the hysterosomal setae (*sc i* and *sc e*).

Hosts were only lightly infested, and mites were found in small numbers attached to hairs on the proximal part of the forearm, adjacent wing membrane, and upper leg.

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Resumen—Se describen tres especies nuevas de ácaros labidocárpidos (Listrophoroidea, Chirodiscidae) de murciélagos de Puerto Rico. *Lawrenceocarpus puertoricensis,* sp. n., difiere primeramente de la especie íntimamente relacionada, *L. micropilus* Dusbábek y Cruz, por su tamaño mayor; por el número y posición de setas opistosomales en ambos sexos; por la presencia de una seta en forma de hojuela en el tarso III, la cúal está ausente en *L. micropilus*; por la forma de la uña accesoria del tarso IV (recta en *L. puertoricensis*, redondeada en *L. micropilus*); por la forma y posición del órgano copulador del macho; por la forma del apodema coxal I y por la forma y posición de las patas II–IV de las hembras copuladoras. De *L. dusbabeki* Cruz difiere por su mayor tamaño; por la forma de las uñas accesorias; por la forma y tamaño relativo

del órgano copulador del macho; de las hembas copuladoras por la forma y localización de las patas II–IV; de las larvas por la disposición de las setas histerosomales. De *L. lobus* McDaniel se diferencia por el desarrollo menos marcado de las proyecciones posteriores de la placa propodosomal; por la quetotaxia del cuerpo y por su tamaño mayor. De *L. phyllostomus* McDaniel difiere por el tamaño menor del macho y mayor de la hembra; por el número y posición de las setas opistosomales en ambos sexos y por la presencia de una seta en forma de hojuela en el tarso III. De *L. mimon* Fain se diferencia por su mayor tamaño. El hospedero típico es *Brachyphylla cavernarum* y la localidad típica es la Cueva Corozal cerca de Corozal, Puerto Rico. *L. puertoricensis* había sido reportado de Puerto Rico por Tamsitt y Fox (1970) bajo el nombre *L. micropilus* Dusbábek y Cruz.

Paralabidocarpus foxi, sp. n., difiere primeramente de *P. artibei* Pinichpongse por ser ligeramente de mayor tamaño; por tener el par inferior de setas cerca al apodema coxal III bastante más pequeñas que el par superior y por la forma de la placa pequeña de las setas propodosomales. De *P. tonatiae* Fain se diferencia por su tamaño ligeramente mayor y por no tener el gnatosoma notablemente más agudo. *P. carolliae* Fain se distingue por su tamaño menor y por el mayor desarrollo del solenidio de las patas IV. *P. foxi* se diferencia de *P. macrophyllum* Fain por su talla mayor; por la longitud de la seta superior sobre el apodema coxal III (considerablemente más corto en *P. macrophyllum*) y por la ausencia de la proyección externa esclerotizada del apodema coxal II. De *P. trachops* Fain *P. foxi* se distingue por su tamaño mayor; por la longitud de la seta inferior dorsal al apodema coxal III (muy delgada y corta en *P. trachops*) y por las posiciones relativas de las setas propodosomales. El hospedero típico es *Artibeus j. jamaicensis* y la localidad típica es Luquillo Experimental Forest cerca de El Verde, Puerto Rico. *P. foxi* había sido anteriormente reportado por Tamsitt y Fox (1970) como *P. artibei* Pinichpongse.

Paralabidocarpus stenodermi, sp. n., difiere de *P. surinamensis* Fain por su tamaño menor y por la longitud del solenidio del tercer segmento de la pata IV. *P. stenodermi* se diferencia de *P. desmodus* Fain por su tamaño mayor; por la pequeñez de la seta inferior dorsal al apodema coxal III, la cúal es tres veces más larga en *P. stenodermi* y por la pequeñez relativa del gnatosoma a las placas propodosomales de *P. desmodus*. De *P. anthorhinae* Fain difiere principalmente por su mayor tamaño. *P. stenodermi*, *P. surinamensis*, *P. desmodus* y *P. anthorhinae* difieren de las otras especies del género por la forma de las placas propodosomales; por la ausencia de una conexión esclerotizada entre las dos setas propodosomales; por su tamaño relativo y por la disposición de las setas histerosomales. El hospedero típico es *Stenoderma rufum darioi* y la localidad típica es Luquillo Experimental Forest cerca de El Verde, Puerto Rico. *P. stenodermi* había sido reportado anteriormente por Tamsitt y Fox (1970) como *P. artibei* Pinichpongse.

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